19980127.ba v01_n894.bam.980127 v01_n895.bam.980127 v01_n896.bam.980127

>From ???@??? Tue Jan 27 02:35:44 1998
Message-Id: <199801270653.AAA18242@sco.theporch.com>
Date: Tue, 27 Jan 1998 00:53:07 CST
Subject: BOATANCHORS digest 1894

BOATANCHORS Digest 1894

Topics covered in this issue include:

1) RE: SB-200 on WARC bands?
by Ed Sieb <esieb@gmsiworld.com>
2) Cardboard Calculators
by don merz <71333.144@compuserve.com>
3) Re: BAer visit
by Paul Bernhardt <bern@ppdu.nrl.navy.mil>
4) 30S-1 Peter Dahl Xfmr User Report (long)
by Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
5) Re: rack shelves
by Tom Norris <badger@telalink.net>
6) 1940 Sargent Model "WAC 44" Receiver Arrived today.
by John Dilks <oldradio@worldnet.att.net>
7) Rack Shelves
by JD <k1zat@dsport.com>
8) Re: NC-100XA questions
by Ron Hershey <rhershey@europa.com>
9) Echophone
by rlahlum@juno.com (Ross J Lahlum)
10) Re: Reflex (not "regen")
by Ron Hershey <rhershey@europa.com>
11) Re: Reflex (not "regen")
by Ho4bart <Ho4bart@aol.com>
12) Sam's Manuals
by Terry Muncey <Terry@electrosys.com>
13) Re: Reflex (not "regen")
by "larry W6WUH" <rau@wco.com>
14) R-649/UR
by Al Klase <skywaves@bw.webex.net>
15) Re: Testing 4x150's ?
by "larry W6WUH" <rau@wco.com>
16) RE:Information
by Mark Richardson <Mark.Richardson@cisco.com>
17) Transformer Help needed
by "John K9UWA" <k9uwa@cris.com>
18) Re: B&W 850A needed
by davidh@getnet.com
19) Re: NC-100XA questions

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     by John Kolb <jlkolb@cts.com>
 20) Re: Reflex (not "regen")
     by Ron Hershey <rhershey@europa.com>

----------------------------------------------------------------------

Date: Mon, 26 Jan 1998 16:51:05 -0500
From: Ed Sieb <esieb@gmsiworld.com>
To: Old Tube Radios <boatanchors@theporch.com>,
        "'Lee Blaske'"
Subject: RE: SB-200 on WARC bands?
Message-ID: <01BD2A7A.98C0F0C0@dstephen.gmsiworld.com>

As the "bandwidth" on this  amp is determined by the input tuning =
circuits, there are two methods you can employ to operate on these new =
bands.
First, I assume that the rig you're intending to use is a boatanchor =
rig, isn't it? :-)   =20

1-  You can try and retune the input coils to the new bands. If they =
tune OK,  this will work out fine and your amp should operate there OK =
(barring any unforeseen=20
resonance the RF plate choke). Of course, this will preclude any further =
operation on the former bands (likely 10 and 15 meters); not a good =
solution.

2-  Use an antenna tuner between your exciter and the amp. The tuner =
will provide the appropriate conjugate match to match the exciter to the =
new frequencies of=20
operation and match the amp input.  If your rig uses tube outputs, the =
rig's pi-network should handle it. If its' a new-fangled  sand-state =
rig, then either it's own=20
internal auto-tuner (hah!) or an external tuner will work.   But, of =
course, we are talking about a tube output rig (6146's, of course) =
aren't we? Aren't we? :-)

73, de Ed   VA3ES/VE2BAQ         (that's Boat Anchor Quality)

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Ed Sieb, VA3ES          esieb@gmsiworld.com
P. O. Box 8377, Ottawa Terminal, Ottawa, Ontario,  K1G 3H8
613-738-8924  (H)     613-599-5161   (W)=09
AMI #529  Canadian Division Director.
Member - Radio Club of America,  QCWA,  AWA
Net Manager - Canadian Boat Anchor Net (3745 Kcs)
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Date: Mon, 26 Jan 1998 18:04:43 -0500
From: don merz <71333.144@compuserve.com>
To: boatanchors@theporch.com
Subject: Cardboard Calculators
Message-ID: <199801261809_MC2-3098-166B@compuserve.com>

Hi again. This is a note on something I have only seen mentioned infrequently here or elsewhere--probably because it is pretty odd sideline to the normal course of BA collecting. I am talking about slide rule or circular "guides" or "calculators." These are made out of cardboard or plastic and were often handed out as free promotions or for a nominal fee.

Probably the most popular of these was (is?) the IRC resistor color code guide. You know the one--turn the 3 little wheels until the resistor band colors you want appear in the windows and then read the resistor value off of the smaller windows below--very handy for those who have not met ROY G. BIV.

Well, it seems that there must have been many of these made for every conceivable radio purpose. Not to be outdone by those resistor guys, the Sprague folks made a similar one for their later-to-become-infamous black beauty capacitor line.

The oldest one I have is the Ohmite Ohm's Law Calculator--a simple cardboard slide rule that "solves any Ohm's law problem with one setting of the slide"--and, oh by the way, happens to also show the Ohmite stock number for the particular resistor value and wattage selected! The Ohmite "calculator" is dated 1940. Here are some others that I have:

1943: Allied Radio RF Resonance and Coil Winding Calculator--another slide rule type--still quite useful!

1944: WRL Tube Base Calculator: Shows the tube base connections for a variety of tube types--AND lets you get yet another look at Leo Myerson's not-quite-smiling face!

1945: Victory World Wide Time Indicator. Okay, this one is not radio-specific. But, hey, if you want to know what time it is wherever you are hunting DX, this slide-rule gadget will tell you. Of course, the locations are not major cities--they are all famous WWII battlefields: Wake Island, Kursk, Guadalcanal, Tarawa, etc. so you may have to do a bit of figuring...

1963: W9IOP's Second Op: A circular guide to "DX information about all countries officially recognized by the Amateur Societies of the world." Sponsored by Electro-Voice (but it doesn't tell you which mic to use to sound like a big gun...).

1964: W9IOP's Q-Dial: Can't remember those nasty Q-signals? Never fear! Just spin this dial and QRO--that oughta fix anything...I guess this was the long-awaited sequel to the "Second Op."

So that's my "collection." I am kinda fond of these for some silly reason and I'd like to know what others are out there waiting to join my merry band. Let me know if you have a clever one that I should be looking for. Also, if you're at a hamfest this year and see one cheap, please buy it for me and I'll pay you back.

Thanks.
73, Don

Date: Mon, 26 Jan 1998 18:54:12 -0500 (EST)
From: Paul Bernhardt <bern@ppdu.nrl.navy.mil>
To: laffitte <laffitte@prtc.net>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: BAer visit
Message-ID: <Pine.A32.3.91.980126182750.52820C-100000@ppdu.nrl.navy.mil>

Guido,

Thanks for the exciting visit in you home. I drove back to the Arecibo Observatory after having a very nice fish dinner at the Cuban restaurant in San Juan. They gave us a lot of food as predicted but we managed to eat everything including desert. The call sign for Arecibo is KP4AO and the hams here were interested to hear about the trip to see KP4FAR.

Your collection of R-390, R-390A, National, Hammarlund, receivers is very impressive. Expecially because they are well organized in the radio room.

If you or any BA experts come to the Arecibo Observatory in Puerto Rico, ask to see Angel Vazquez (WP3R). He may be able to arange arrange for a tour of the Observatory. Ask to see the radio telscope receivers and the radar transmitters. The Observatory also runs a facility near Islote that uses 100 kW triodes used for the ionospheric HF experiments. Another fellow, Bob "Zimmo" Zimmerman (NP4B) would be happy to meet fellow hams. There is a new science museum at the Arecibo Observatory that shows movies, has displays and sells scientific gadgets along with shirts. You might wand to check out the Arecibo Observatory web site at http://www.naic.edu

I will be in Puerto Rico for another week and then back to Verginia.
Sincerely, Paul Bernhardt

```
Work:P.A. Bernhardt               Home: Paul Bernhardt, KF4FOR
     Code 6794                          5704 Ridge View Dr.
     Naval Research Laboratory          Alexandria, VA 22310
     Washington, DC 20375
Tel: 202-767-0196                       703-960-9656
FAX: 202-767-0631
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On Mon, 26 Jan 1998, laffitte wrote:

> Hi Gang:
>
>   I just had a visit from Paul Bernhardt who is here in PR on job related matters. It was a very pleasant experience to meet with with such a nice person (and his friend Greg). We spent some time in our favorite subject discussing BA adventures and collecting interest. Over here there are no other BA collectors so this was a unique experience. We talked about the scarcity of hamfests here on the island and the difficulties of getting equipment here plus about all the BAs in my shack. As Paul left, I directed them toward a good Cuban(I can't deny my roots!) food restaurant which I hope that they found. I hope we can repeat this again with more time to spare. Thanks Paul!
>
> Best 73s
> Guido KP4FAR
> BA collector in the tropics
>

Date: Mon, 26 Jan 1998 19:06:28 -0400
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
To: COLLINS@LISTSERV.TEMPE.GOV
Cc: boatanchors@theporch.com
Subject: 30S-1 Peter Dahl Xfmr User Report (long)
Message-ID: <v03102801b0f2a6b3c48c@[134.53.65.12]>

Hi Gang:

Here' s a user report on a new Peter Dahl replacement plate transformer for my 30S-1 amplifier. Because the Dahl transformer replaced a working original Collins transformer (sorry, the original is not for sale), I was able to make extensive before-and-after checks when I made the swap. Here's what I found:

A. Background: The original Collins plate transformer provides both plate and screen voltages for the 4CX1000A. The transformer has dual 115V primaries, each tapped for a HI (ssb) and LO (cw) position The secondary has dual plate windings, each providing 3160VAC @ 350 mA CCS. The two secondary windings are connected in series, with the connection point used as a grounded center tap. In addition, the secondary windings include a screen voltage winding of approximately 265VAC @ 350 mA CCS, and is not center-tapped. (Why the screen winding needs 350 mA CCS capability is beyond me; I guess the manufacturer used the same size wire as for the HV winding.) A total of 12 wires, come out of the transformer; however, since two HV secondary wires are always tied together, the wires are numbered 1-11. The transformer mounts with four 1/4 inch screws into threaded holes in the base of the unit. There are three styles of transformers, electrically equivalent but with slightly different physical characteristics. My transformer has a large eight pin barrier strip mounted at the top.

A weakness of the original Collins transformer, reported to me by several owners, is that over time the rubber insulation on the HV secondary wires becomes brittle. When this happens, it is very easy to snap off a fragile HV wire just as it exists the windings. If this happens, good-by transforrmer! When I removed my original transformer, the insulation was badly cracked. As a precaution, I potted the HV wires in epoxy at the weak spot, as recommended by several List members.

B. Peter Dahl Transformer: The Peter W. Dahl Company (http://www.pwdahl.com/) makes several replacement plate transformers for the 30S-1, for 50Hz, various primary voltages, etc. The properties and costs can be viewed on the company web page.The transformer I selected was the model 30S-1M, which is an exact replacement transformer for the U.S. market, except that the screen voltage winding provides about 100 extra volts. The higher screen voltage is the reason I changed transformers. The new transformer cost $425 plus $42 shipping. Delivery took about two weeks

The Dahl transformer is clearly made to higher standards than the original. It is about 1/4 inch taller than the original, but otherwise exactly the same size. The mounting holes line up perfectly. The color is a glossy black, rather than the matt finish black of the original, there is a small Dahl nameplate on the top, and the sleeving around the HV secondary wires is an ugly orange , but otherwise the transformer looks exactly like the original. The non-HV wires are teflon insulated, and each wire is numbered just as in the original. A barrier strip is mounted on the transformer, and it too is numbered like the original.

C. Replacing the Transformer: It took me one hour from start to finish to swap transformers. The procedure is as follows:

(1) Remove the screws securing the auxiliary power supply shelf, and push the shelf out of the way.

(2) Remove the rectifier tubes, and unsrew the HV wires from their standoff insulators.

(3) Unscrew the 8 wires from the barrier strip.

(4) Unsrew the four transformer mounting screws and lift out the transformer.

(5) Set the new transformer in place, and reverse the steps 1-4.

Although it isn't really mandatory, you might also want to replace C204 (40uF @350V) with a new 47uF/ 450V rated capacitor, since the higher screen voltage will be close to the voltage limit of the original capacitor. C204 is mounted on the rear of the power supply compartment.

Adjustments: With the higher screen voltage, it is necessary to adjust the bias voltage to keep the resting plate current at 200mA. Without adjusting the bias, I found the resting current increased to 580mA, which grossly exceeds tube ratings. Fortunately, there is plenty of adjustment range on the bias pot. The correct new bias voltage for my tube was 56 V. Find the exact value by trial-and-error. You're shooting for 150-200mA zero-signal plate current in the SSB position.

After you've checked out everything, you'll also need to adjust C112 in order to zero the Tune/Load multimeter. Moving C112 counterclockwise about 1/8 turn will get you in the ballpark..

D. Voltage/Current./Power Comparisons: The following comparisons were made at 3.892 MHz, with the amplifier tuned and loaded for optimum conditions into a 2500W Bird dummy load. With the original transformer, the Tune/Load controls were set at 52 and 26 respectively. With the Dahl transformer, the settings were 51 and 57. "Optimum" in this case means those settings that give maximum power output with the drive adjusted to give simultaneous zero screen and grid current. Scewn voltages were measured at the negative lead of C204 with a Fluke 87. A KWM-380 was used as the exciter, with no ALC connected.

	Original Collins Transformer	Peter Dahl Transformer
Plate Voltage (off line)	2960 VDC	2970 VDC
Plate Voltage (Ip=550mA)	2550 VDC	2650 VDC
Screen Volt. (off line)	232 VDC	334 VDC
Screen Volt (online,no sig, Ip=200mA)	216 VDC	313 VDC
Plate Current @ positive grid current thresh.	580 mA	900+ mA
Plate Current @ positive screen curr. thresh.	560 mA	880 mA
Power Input @ positive screen curr. thresh.	1480 W	2330 W
Power Output@ positive screen curr. thresh.	1000 W	1550 W

Drive Power @ positive screen curr. thresh.   60 W
100 W

(Note: power output was measured on Bird wattmeter. Measurements on two 312B-4 wattmeters showed significantly higher outputs: 1300 W on the original xfmr, and 2000W plus (pinned meter) on the Dahl xfmr.)

E. Subjective Impressions: The higher screen voltage really makes the 30S-1 come to life, with about 50% greater power output. Furthermore, the somewhat greater drive requirement associated with the higher screen voltage makes the amplifier a much better match to the KWM-380 and other 100W exciters. This is an important consideration with the KWM-380, especially, since the ALC in the 30S-1 isn't well-suited to the '380.

Aside from the higher power output, the higher screen voltage makes it far less likely for a user to abuse the 4CX1000A. With the higher screen voltage, the positive grid current threshold is shifted above 900 mA, which means that one is far less likely to inadvertently damage the grid. One similarly protects the screen grid. Under normal operation, the screen current meter deflects in the negative direction; voice peaks, however, can easily drive the screen current dangerously positive. Keep in mind that a full scale meter deflection significantly exceeds screen ratings of the tube.

The tuning of the amplifier is very smooth with the higher voltage. The extra reserve definitely makes tuning seem less finicky, since one doesn't have to be so careful about drive level. The only caveat I can think of in using the higher screen voltage is to go easy on extended key-down operation at 800-900 mA plate current so as not to overheat the tube. However, in all the discussion over the past weeks of cooling of the 30S-1, nobody has reported actually losing a tube by overheating. Also, keep in mind that my tests were made using a 4CX-1000A and not a 4CX-1500B.

F. Effort and Expense: The new transformer is very expensive, adding about 1/4 to 1/3 of the value of a working amplifier. The issue is whether the benefits warrant the cost . (A working original transformer is probably worth about $200-$250 on the used market, which if sold would considerably offset the cost of a new Dahl.) Another consideration is whether the "collector" value of the amplifier is degraded by using a non-stock transformer. For some, it would, particularly if their amplifier is a CCA excellent round emblem amplifier. For me, since 30S-1s are not all-that-uncommon, and since I have a garden variety winged amplifier, I opted to spend the big bucks. Even so, I'm keeping my original transformer, in case a future buyer prefers it to the Dahl.

Incidentally, there is a MUCH cheaper way to get the benefit of a higher screen voltage. than by replacing the plate transformer. According to some excellent notes compiled by Mike Kennedy, KD6LW, one simply takes a small isolation transformer and inserts the secondary in series with the screen voltage winding of the original transformer. Since the screen wires are available at the plate transformer barrier strip, no soldering or modification of the original amplifier is required. The isolation transformer can sit on the accessary shelf. The only downside in this approach is that it is somewhat less elegant. Still, for many users, it is a highly desirable cost-effective option. One way or the other, however, it really is beneficial to up the screen voltage on your amplifier, at least if you're planning on using your 30S-1 on a regular basis..

73,

Jim Garland W8ZR

Date: Mon, 26 Jan 1998 18:11:28 -0600
From: Tom Norris <badger@telalink.net>
To: gpewitt@execpc.com
Cc: boatanchors@theporch.com
Subject: Re: rack shelves
Message-ID: <3.0.3.32.19980126181128.02fcdbf4@mail1.telalink.net>

Hmmm. Never thought of that at home -- we mount our tall repeater cabinets floor and cieling at our West Tennessee radio sites to give them some degree of seismic stability when/if the Big New Madrid Quake strikes. Our site have concrete floors, so we drill and mount studs or sinkers for the bottom of the cabinet. (depends on what we have on hand.)
For the top, we usually use angle stock* to a wall or steel cable to the rafters. All based on FEMA suggestoins for seismic stability. Only time and an earthquake will tell.
Another solution is LEGS on the front to help keep the rack from tipping. Would use good sturdy angle or tube stock that will support the rack, and extend them at least a foot or so depending on the heighth of the rack, and how high the heavy gear is positioned therein. Secure them FIRMLY to the bottom of your rack cab.

All depends on the room, etc of course. If anyone is interested in the FEMA publication number, I can look it up, if I can find the manual at work.

BUT *BE CAREFUL* with rack slides on heavy gear. *I* wouldnt want to be pinned to the floor by a rack full of R-390's and other stuff for a weekend. Would put me in a real bad mood.......

73

Tom

*guess where I got my scrap Al angle stock in my rack from?????

At 08:15 AM 1/26/98 PST, you wrote:
>If your rack is tall enough consider mounting it to the ceiling. No joke.
 The leverage is better this way.
>73 Gary

>---------------Original Message---------------
>Manufacturors recommendations suggest the rack be permanently
>mounted (floor,etc) if the slides are to be used with heavier gear.
>(at least the slides I use at work come with that warning)
>

Date: Mon, 26 Jan 1998 19:56:29 -0500
From: John Dilks <oldradio@worldnet.att.net>
To: "David L. Thompson" <thompson@mindspring.com>
Cc: boatanchors@theporch.com
Subject: 1940 Sargent Model "WAC 44" Receiver Arrived today.
Message-ID: <34CD30BD.5DA3@worldnet.att.net>

Hi David, K4JRB, and the Gang from BoatAnchors,

Well it came today! Finally! After several phone calls and missed-promised ship dates. (Things don't go too fast in Alabama I guess.) And then it took about 30 minutes more to pick out all the styrafoam(?) peanuts.

It's wonderful! It is actually a 1940 Sargent Model "WAC 44" Receiver. It covers all hambands (then 80-75-40-20-10) on bandspread and 2-30 mc (then, mhz now) general coverage. I rate it a 8+ on condition, no obvious modifications, and the seller says it works. (I'll wait until I can check it out before powering it up.)

David, thank you for your help on aquiring this. And thank you BoatAnchors; without this forum I would not have this beautiful receiver.

< Does anybody have a Manual or Schematic? >

73' John Dilks, K2TQN

Webmaster for the Antique Wireless Association
http://www.ggw.org/awa   Click on "Page 2"
-=and=-
for the New Jersey Antique Radio Club
http://www.eht.com/oldradio
-----------------please-visit--------------------

Date: Mon, 26 Jan 1998 20:09:17 -0500 (EST)
From: JD <k1zat@dsport.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Rack Shelves
Message-ID: <Pine.GSO.3.95.980126200325.11374B-100000@puff>

On Mon, 26 Jan 1998, Tom Norris wrote:

> I use aluminum angle stock in my rack -- holds up my R390s

I use Dexon stock for mine. That's the stuff you get in places like Lowe's thats a 90 degree angle stock, steel, and filled with holes of various shapes. A six foot piece of the stuff is only a couple of bucks.

I cut two pieces thats are width between the two rails of the rack. Then using rack screws, bolt one on the back side of the rails with the lip putting out towards the wall. The second one gets bolted on the inside edge of the front rail with the lip also point back to the wall.

They hold my 390, various radios and test equipment, and whatever else I put on them. I've had them there for years.

jd

Date: Mon, 26 Jan 1998 17:11:29 -0800
From: Ron Hershey <rhershey@europa.com>
To: owensc@nebeng.otis.com
Cc: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: NC-100XA questions
Message-ID: <34CD3441.1E4AAE0B@europa.com>

Owens, Clarence wrote:

> Bill Fizette's article in the AWA Old Timer's Bulletin from May, 1988
> (Vol 29 No. 1) "Restoring the National Company Sliding-coil Receivers"
> has the following: "The box has fiber inserts to cushion and insulate
> it from the rod, and often they are loose or out of the holes. It may
> be necessary to cement these back in place to keep them there.". He
> doesn't mention lubrication, but I imagine the fiber inserts would slide
> OK without any hewvy lubrication, if the rod is in good shape.

Thanks Clare:

It looks like the fiber inserts are missing from my set. This may be why the catacomb had enough play to hang up on the electrolytic cap. I wondered at the amount of play when I took it out.
Thanks also for Bill's correspondence address.

Date: Mon, 26 Jan 1998 19:48:01 -0600
From: rlahlum@juno.com (Ross J Lahlum)
To: boatanchors@theporch.com
Subject: Echophone
Message-ID: <19980126.194802.11942.2.rlahlum@juno.com>

Hello BA fans,

A friend at work recently obtained an Echophone which he was told was manufactured by Motorola during WWII. However, there is no nameplate or any other manufacturer info.

I volunteered to pose the question to the BA list - can anyone provide some info on Echophones?
He would also like to have it restored. I am busy with so many things I hesitate to take it on, because I don't want to make him wait 6 or 8 months ;-). Is there anyone (like a Rick Mish type) who does this?

Any info would be much appreciated!

Thanks & 73,

Ross Lahlum, KB9JJR

____
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Get completely free e-mail from Juno at http://www.juno.com
Or call Juno at (800) 654-JUNO [654-5866]

Date: Mon, 26 Jan 1998 18:27:43 -0800
From: Ron Hershey <rhershey@europa.com>
To: B.H.Jarvis@hw.ac.uk
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <34CD461F.CA527016@europa.com>

Bill Jarvis wrote:

> I've been looking for tips - or complete circuits for a "reflex"
> receiver. Not the sort which has adjustable reaction at RF, but the sort
> which uses one valve as an RF stage and again as an AF stage.
>
> I thought I had at least one such circuit in all my reference books but
> they all turn out to be "regenerative", or circuits with reaction at the
> one frequency.
>
> I'd welcome a scan, or a verbal description, or pointers to where I can
> read about them.
>
> I believe a researcher at the (UK) Military Radio Research Centre at
> Malvern, Worcestershire wrote an entire textbook about them; but I can't
> find anything of his.
>
> Incidentally I've seen one or two circuits in which what appears to be
> audio is fed back into the aerial circuit; but I could be
> misunderstanding a true reflex receiver circuit.
>
> Any other sites anyone can recommend on this subject?
>
> Thanks all -
>
> Bill
> GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering
>
> Capax imperii - nisi imperasset

>
> Net-Tamer V 1.10 - Registered

"Behind The Front Panel" by David Rutland has a chapter on reflex circuits.. The book is about the design and development of radios during the 20's so it pretty much concentrates on broadcast band receivers. It's a fascinating look into an incredible decade of radio design advancement.

AES carries the book for $18.95.

Best regards,
Ron Hershey

Date: Mon, 26 Jan 1998 22:16:29 EST
From: Ho4bart <Ho4bart@aol.com>
To: B.H.Jarvis@hw.ac.uk, boatanchors@theporch.com
Subject: Re: Reflex (not "regen")
Message-ID: <3b3d1537.34cd518f@aol.com>

In a message dated 98-01-26 14:48:40 EST, B.H.Jarvis@hw.ac.uk writes:

> Incidentally I've seen one or two circuits in which what appears to be
> audio is fed back into the aerial circuit; but I could be
> misunderstanding a true reflex receiver circuit.

---maybe i am misunderstanding what you are looking for, but the
above circuit is reflexed.
i recently received a copy of a 1949 german ham magazine (tnx!)
and was interested to see in it a 2-valve regen with one reflex
RF / AF amp ==> regen detector ==> and back to the first tube ==>
then to earphones. and the coil specs were for 80 to 2 meters via
plugin coils!!
one of the cutest designs i have seen was in Popular Electronics
i think it was, and used i think a dual triode like 12AT7 and audio
output tube like 6AK6:
triode RF amp, antenna isolater ==>triode regen det ==> back to
first triode section for 1st audio amplification ==>pentode audio
output.   actually if you wanted to use a 3-triode compactron you
could do all this in one valve.
hue

Date: Mon, 26 Jan 1998 21:35:43 -0600
From: Terry Muncey <Terry@electrosys.com>
To: "'boatahcnors@theporch.com'" <boatahcnors@theporch.com>
Subject: Sam's Manuals
Message-ID:
<c=US%a=_ecs%p=ElectroSys%l=WEBMASTER-980127033543Z-324@webmaster.eletrosys.com>

Looking for someone who has some Sam's 750 to about 900 folders. Also looking for a complete set of Sams HF series, CB series, VCR series, Transistor Radio series and still looking for originals or copies of Sams dial stringing book DC-3 and DC-7! All to be used to preserve the Age of Radio digitally!

Radio Era Archives
Terry - WB5OAS "Old And Senile"
Please respond to tsm@electrosys.com

Date: Mon, 26 Jan 1998 19:33:06 -0800
From: "larry W6WUH" <rau@wco.com>
To: "Bill Jarvis" <B.H.Jarvis@hw.ac.uk>
Cc: "boatanchors" <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <199801270335.TAA00095@shell.wco.com>

please post what you find... I have never seen one of these circuits in 40 years.. but understand some of the two transistor "boys radios" were of the reflex type.

larry W6WUH

Date: Mon, 26 Jan 1998 22:41:21 -0500
From: Al Klase <skywaves@bw.webex.net>
To: Boatanchors <boatanchors@theporch.com>
Subject: R-649/UR
Message-ID: <34CD5761.693C6E1E@bw.webex.net>

Anchorites,

Does anyone have any info on the Hallicrafters R-649/UR, see Dachis, page 185. This Coast Guard radio bears some physical resemblance to the SX-73 (R-274D), but electrically seems to be a later-day Scott SLR: AC/DC circuit, 15 Tubes, 200KC-18MC coverage, push-pull output, etc.

Was gifted with one of these in rough shape. Schematic would be most helpful. Probably the biggest problem's gonna be the busted dial bezel. I don't guess there's any parts around?

Any help appreciated,
73, Al
--
Al Klase - N3FRQ
skywaves@bw.webex.net
Flemington, NJ 08822
Web Page: http://www.webex.net/~skywaves/home.htm

Date: Mon, 26 Jan 1998 19:38:25 -0800
From: "larry W6WUH" <rau@wco.com>
To: "George C. Rybicki" <gcr2@po.CWRU.Edu>
Cc: "boatanchors" <boatanchors@theporch.com>
Subject: Re: Testing 4x150's ?
Message-ID: <199801270341.TAA01966@shell.wco.com>

you have to work it out from the tube charts... take a known good tube.. and dick with it untill you get the right Mu readings.. a base diagram will tell you the pins and where to set them ... this is easy on a hickock ... then you'll have your own chart...what do you plan to do for air ?

You are not going to exceed the tube ratings assuming you pay attention ..it 's the tester you have to worry about !

Larry

Date: Mon, 26 Jan 1998 21:09:02 -0700
From: Mark Richardson <Mark.Richardson@cisco.com>
To: boatanchors@theporch.com
Subject: RE:Information
Message-ID: <2.2.32.19980127040902.00687940@lint.cisco.com>

Fellow BA'ers

I have a radio transmitter that I searching for information on, hopefully one of you may have run into it before. So here goes, Built by Western Electric about 1950+- as commercial and military point to point multiple-channel SSB or single channel DSB. Western Electric designation LD-T2, US Army signal Corps Destination T-265/FRC10. Specs as follows.

Frequency Range in Mc:

transmitter: 4 to 23
Type Modulation:
AM
Type of Signals:
Composite transmission consisting of tone-radiotelegraph,voice,facsimile, or other audio frequencies in the range from 100 to 6000 cps; also , standard double-sideband am.
Pwr Output:
4kw (ssb peak envelope power), 1 kw (dsb carrier)
Pwr Requirements:
transmitter: 10 kw, 230-v 50/60 3-phase ac
Major Units:
1 T-265/FRC10   84" x 84" x 42.5"   5800 lbs

The information above is excerpts from MIL-HDBK-161A/TM 11-497A-1/NAVEXOS P-2058/TO 31-3-73 pages 199 and 200

Yes you read right 7 ft high 7 ft long 3.5 ft deep over 2.5 tons. I picked up the radio in 1987, at sealed bid auction at Utah Valley State Collage in Orem, Utah. Came with manuals and blueprints. I kept it in storage until 1994 when I moved it to my QTH and restored (3 years) it. All running now for 6 months mostly on 20 17 15 tuning range is wide enough for 80 thru 10 meters.

What I would like is information about its life in military or commercial operations. Maybe when it was built etc, etc. Judging from the tube line up (79 tubes) and types I am guessing about 1950, the blueprints are dated 1951. I have also have photos (compressed windows bitmaps),if anybody wants them mail me, for reference.

Looking forward to hearing from the gang.
See you on the bands.

```
                        Mark
                        W7HPW
       ||         ||               Mark Richardson
      .||.       .||.              Systems Engineer
     .||||.     .||||.             4001 South 700 East
  .:||||||||:.:||||||||:.          Suite 500
  c i s c o S y s t e m s          Salt Lake City, Utah   84107

                      Office    801 264 6777
                      Cellular  801 361 3097
```

Date: Mon, 26 Jan 1998 23:33:40 +0000

From: "John K9UWA" <k9uwa@cris.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Transformer Help needed
Message-ID: <199801270433.XAA14815@cliff.concentric.net>

Anyone have a Stancor Book.....

Stancor A-4719 = A-73C ??

I have been trying to find a Stancor A-73C which is the listed substitute part for the audio driver transformer in my Grunow 1101 (Riders 4). This set has push-pull parallel 45s (4 tubes) being driven by a 37 as the audio driver tube. Today I picked up a Stancor A-4719. The A-4719 is listed to be an audio input transformer from single 27, 37, 56, 76, 6C5,etc., to single or Pushpull grids of 42, 45, 47, 71A, 2A5, etc. It states it has a 3:1 ratio.

Will this transformer work well in my set?

Thanks for the help....de John K9UWA
John Goller, K9UWA
k9uwa@cris.com

Date: Tue, 27 Jan 98 04:54:31 +0000
From: davidh@getnet.com
To: "Stan Griffiths" <w7ni@teleport.com>
Cc: <boatanchors@theporch.com>
Subject: Re: B&W 850A needed
Message-ID: <199801270454.VAA08408@getnet.com>

Hi Stan - the 4-1000 amp did not melt the coil in my B&W850A. I bought an old 4-1000 junker for parts and the coil Lucite in the 850A had disintegrated from age - it was not melted from overheating and that was why I had to replace the coil. The 850A was designed for a pi-network to be used with a single 4-1000, 3-1000, a pair of 3-400's, etc. It was listed that way in the 1991 B&W catalog. It worked fb in my homebrew amp running 4500 volts on the plate. I did melt a couple of plate chokes when I was using the amp on 160. This was due to not having enough inductance.. They were wound on some plastic material. They melted while working a contest. Fortunately there was no fireworks as it could have been bad at those power levels.

73,

Dave N7RK

****

*

Dave N7RK - Webmaster CADXA
Phoenix, Arizona   *DXCC Honor Roll*   *WAZ#23 - 75 Meter SSB*

ex-N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor Collector Extraordinaire preferring Hallicrafters, National
and what ever else looks interesting!

```
                                  \\-//
davidh@getnet.com                 (o!o)
http://www.getnet.com/~davidh
------------------------------ooO0-(_)-O0oo--------------------------------
-
E-Mail Address                                         My Home Page
```

Visit the Central Arizona DX Association Home page --- http://cadxa.org

----

Date: Mon, 26 Jan 1998 21:40:12 -0800 (PST)
From: John Kolb <jlkolb@cts.com>
To: Ron Hershey <rhershey@europa.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: NC-100XA questions
Message-ID: <Pine.SCO.3.91.980126213248.16033A-100000@sd.cts.com>

On Sun, 25 Jan 1998, Ron Hershey wrote:

> The catacomb slides along a steel rod that goes from side of the chassis
> to the other. In this set, there are clear plastic sleeves about an inch
> long on each end of the rod. These appear to be acting as bumpers and
> are torn up from the catacomb bumping into them. Are these original to
> the set or are they another field fix? Since I've got the catacomb

Nothing like that in my RAO, which is a very simular radio. However, in the RAO, I found the catacomb would move so far to one side that the gear teeth on it would become unmeshed with the gear on the bandchage knob, and the front catacomb box would loose it's fixed relationship to the rear catacomb box. I put stick on rubber feet on the inside of the chassis to keep the catacombs from moving as far, and to cushion them somewhat. Original or not, I expect your plastic sleeves serve a useful purpose.

> Any suggestions for lubing the rack gear? I cleaned all the petrified

I used Lubriplate on the rod and in the tuning cap gearbox.

John Kolb KK6IL jlkolb@cts.com

Date: Mon, 26 Jan 1998 22:51:06 -0800
From: Ron Hershey <rhershey@europa.com>
To: rau@wco.com
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <34CD83DA.AD43DB87@europa.com>

larry W6WUH wrote:

> please post what you find... I have never seen one of these circuits in 40
> years.. but understand some of the two transistor "boys radios" were of the
> reflex type.
>
> larry W6WUH

It's not a boatanchor but I own a FADA 160A battery set made in 1925. It's a reflex neutrodyne and works pretty much as described. The detector output is fed back through an audio transformer whose secondary is in series with the tuned input of the 1st RF amp which now also becomes the 1st audio amp. The primary of the audio transformer is bypassed with a cap so the RF is not fed back to the detector. The output of the first RF stage feeds into a tuned RF transformer feeding the 2nd RF amp. In series with the RF transformer is an audio transformer which feeds the 2nd audio amp. The audio transformer primary is bypassed to keep RF out of the audio amp. So the signal paths are kept separate by the use of tuned resonant circuits for the RF and bypassed audio transformers for the audio signal.

One cute detail is that the reflex circuit only works when a speaker is plugged in. Plugging in a headset disconnects the audio transformer from the 1st RF stage.

Best regards,
Ron Hershey

End of BOATANCHORS Digest 1894
****

>From ???@??? Tue Jan 27 21:37:30 1998
Message-Id: <199801272006.OAA06773@sco.theporch.com>
Date: Tue, 27 Jan 1998 14:06:25 CST
Subject: BOATANCHORS digest 1895

BOATANCHORS Digest 1895

Topics covered in this issue include:

1) Reflex receivers
   by Scott Robinson <spr@earthlink.net>
2) Reflex Radios
   by Jim Hill <jshillw6ivw@earthlink.net>
3) re: reflex and multipurpose stages
   by Ho4bart <Ho4bart@aol.com>
4) Re: Cardboard Calculators
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
5) Re: Reflex (not "regen")
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
6) Re: Reflex (not "regen")
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
7) Re: Reflex (not "regen")
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
8) Re: Reflex receivers
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
9) Re: Reflex Radios
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
10) Postage stamps
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
11) Reflex=Doerle
   by MNHopkins <MNHopkins@aol.com>
12) B&W 160 meter coil price
   by Sandra L Knepper <slkst29+@pitt.edu>
13) National NTE 6000 Help
   by K1HC <K1HC@aol.com>
14) WTD: Johnson Ranger
   by Stanley Wilson <microres@crl.com>
15) Re: Reflex receivers - Design Information
   by Stanley Wilson <microres@crl.com>
16) Electric Radio Magazine Index - NEW On-Line Search Engine
   by "Don Buska" <d.buska@AAIATE.COM>

17) Re: Reflex=Doerle
by "Roberta J. Barmore" <rbarmore@indy.net>
18) National NC-1000
by Nick England <nick@cs.unc.edu>
19) SX-43 knob question
by jcreid@CCGATE.HAC.COM
20) Collins S-Line: Condition Guide?
by arc5@ix.netcom.com
21) Cardboard Calculators
by arc5@ix.netcom.com
22) Re: Reflex Radios
by "Arden Allen" <aallen@sirius.com>
23) Re: Cardboard Calculators
by Stanley Wilson <microres@crl.com>
24) SB-200 on the WARC Bands
by RSOLOMON@systems.TEXTRON.COM
25) Re: Transformer Help needed
by jackiv@juno.com (John M Iverson)
26) Re: Information
by jackiv@juno.com (John M Iverson)
27) Re: Echophone
by "Deane D McIntyre" <dmcintyr@acs6.ACS.UCALGARY.CA>
28) precision sig gen
by lee1@digital.net
29) Away All HRO Mods
by Jderm740 <Jderm740@aol.com>
30) BA-era satellites
by midshires@cix.co.uk (Andrew Emmerson)

Date: Mon, 26 Jan 1998 23:32:16 -0800
From: Scott Robinson <spr@earthlink.net>
To: boatanchors@theporch.com
Subject: Reflex receivers
Message-ID: <v03007800b0f33d706f2b@[153.34.139.161]>

=46olks,

I've seen late '30s GE low cost BC radios that ran the signal through the IF amp twice-IF and audio. Also, I have an early '50s K=F6rting (German) large table radio that uses the RF amp this way. This radio has plenty of tubes; I'm surprised they bothered to do this.

Regards,

Scott Robinson
spr@earthlink.net

Junque is GOOD for you!

Date: Tue, 27 Jan 1998 00:01:22 -0800
From: Jim Hill <jshillw6ivw@earthlink.net>
To: boatanchors@theporch.com
Subject: Reflex Radios
Message-ID: <3.0.5.32.19980127000122.007c9b10@earthlink.net>

Ron Hershey:
I think you were looking for information on reflex receivers. Another source is the early 20's issues of QST. In that era, chief engineers and other high level people in the radio manufacturing field wrote articles about their designs, and there were 2 - 3 articles on reflex receivers. Look around 1924 to 1926, I think. I think I reproduced some of these articles, and can look if you don't have them available locally. I decided the issues were too old to have copywrite problems.

Date: Tue, 27 Jan 1998 03:30:08 EST
From: Ho4bart <Ho4bart@aol.com>
To: boatanchors@sco.theporch.com
Subject: re: reflex and multipurpose stages
Message-ID: <bca4171a.34cd9b13@aol.com>

one circuit which boggles my mind is the TCS receiver first audio / bfo tube 12SK7. it does both at the same time. you might think that oscillating might shift the bias point away from that idea for low level audio use, or that audio might modulate the bfo, which then goes back into the detector diode.......i wonder if this tends to make ssb sound even worse? or maybe the low audio level plus low efficiency grid modulation of the bfo has only negligible effect? i used the TCS before as a novice cw rig, but on cw i never noticed any adverse effects from this multiple use.
hue miller

Date: Tue, 27 Jan 1998 09:29:02 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: "71333.144" <71333.144@compuserve.com>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Cardboard Calculators
Message-ID: <199801270929.JAA25899@punt1.hw.ac.uk>

On 1998-01-26 71333.144@compuserve.com said:
 71>Content-Disposition: inline
 71>X-Sender: don merz <71333.144@compuserve.com>
 71>X-Listprocessor-Version: 8.1 -- ListProcessor(tm) by CREN
 71>Status:
 71>Hi again. This is a note on something I have only seen mentioned
 71>infrequently here or elsewhere--probably because it is pretty odd
 71>sideline to the normal course of BA collecting. I am talking about
 71>slide rule or circular "guides" or "calculators." These are made
snip
You forgot the "Oscalator" - two plastic circles on a plastic rectangle
- help you catch the first amateur satellite. Where are they now?
Published by Trisagion Ltd - I oughta know - I WAS Trisagion Ltd.....

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Possunt quia posse videntur

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:18 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: rhershey <rhershey@europa.com>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <199801270929.JAA25912@punt1.hw.ac.uk>

On 1998-01-27 rhershey@europa.com said:
 rh>"Behind The Front Panel" by David Rutland has a chapter on reflex
 rh>circuits.. The book is about the design and development of radios
 rh>during the 20's so it pretty much concentrates on broadcast band
 rh>receivers. It's a fascinating look into an incredible decade of
 rh>radio design advancement. AES carries the book for $18.95.

rh>Best regards,
rh>Ron Hershey

Many thanks; can you please direct me to AES?

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Laborant montes, parturiunt haec mus

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:33 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: rau <rau@wco.com>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <199801270929.JAA25925@punt1.hw.ac.uk>

On 1998-01-27 rau@wco.com said:
ra>Cc: boatanchors <boatanchors@theporch.com>
ra>Status:
ra>please post what you find... I have never seen one of these
ra>circuits in 40 years.. but understand some of the two transistor
ra>"boys radios" were of the reflex type.
ra>larry W6WUH

Maplin Magazine No 31, I'm told, carried a reflex tr*ns*st*r circuit (wash my mouth out) so I'm trying to obtain a copy in a plain brown envelope. I'll then have to connect the fax machine and a 9 V battery to the 'pooter modem so that I can use the fax machine as a scanner. It's a good trick and takes less than an hour. I'll then have a file I can share with BA. Yes, I'll share any other definite recipes. It's all "pointers" so far but enough to make me wonder whether I could not use modern passive components and circuit techniques to make one valve perform RF and AF amplification. Maybe just one R load?

Here's the outline: Normal tuned RF stage, into hi-gain tube with R load. RC filter from anode to detector stage; AF output back into grid of same tube; a different RC filter from same anode to 'phones.

I'll probably get reaction or regeneration as well.

I have forgotten why I embarked on this. Oh, yes - pile of old valves and I want to hear them receiving Long Wave. Usurped by Cricket commentaries in the UK; but otherwise v good all day info and entertainment without appalling junk music bursting out all over the place.

I'd really like to find a working 2 V accumulator and a 120 V B battery, too, to match my mentality.

Thanks for the assistance -

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Quem deus vult perdere prius dementat

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:38 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: rhershey <rhershey@europa.com>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex (not "regen")
Message-ID: <199801270929.JAA25928@punt1.hw.ac.uk>

On 1998-01-27 rhershey@europa.com said:
 rh>It's not a boatanchor but I own a FADA 160A battery set made in
 rh>1925. It's a reflex neutrodyne and works pretty much as described.
Many thanks Ron. Plenty of welcome tips this am.

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Si vales, bene est

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:44 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: spr <spr@earthlink.net>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex receivers
Message-ID: <199801270929.JAA25931@punt1.hw.ac.uk>

On 1998-01-27 spr@earthlink.net said:
sp>Folks,
sp>I've seen late '30s GE low cost BC radios that ran the signal
sp>through the IF amp twice-IF and audio. Also, I have an early '50s
sp>Krting (German) large table radio that uses the RF amp this way.
sp>This radio has plenty of tubes; I'm surprised they bothered to do
sp>this. Regards,
sp>Scott Robinson
sp>spr@earthlink.net
sp>Junque is GOOD for you!
Thanks Scott - plenty of good ideas so far.

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Quem deus vult perdere prius dementat

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:49 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: jshillw6ivw <jshillw6ivw@earthlink.net>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex Radios
Message-ID: <199801270929.JAA25934@punt1.hw.ac.uk>

On 1998-01-27 jshillw6ivw@earthlink.net said:
js>Ron Hershey:
js>I think you were looking for information on reflex receivers.
js>Another source is the early 20's issues of QST. In that era,
js>chief engineers and other high level people in the radio
js>manufacturing field wrote articles about their designs, and
js>there were 2 - 3 articles on reflex receivers. Look around 1924
js>to 1926, I think. I think I reproduced some of these articles,
js>and can look if you don't have them available locally. I decided
js>the issues were too old to have copywrite problems.
Many thanks OM. I'd welcome one or two circuits by way of example. I'm

trying to get an authentic '20s circuit working. If you incur any cost please let me know what I could look out for, by way of exchange.

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Aiunt multum legendum esse, non multa

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 09:29:54 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: boatanchors <boatanchors@theporch.com>
Subject: Postage stamps
Message-ID: <199801270929.JAA25937@punt1.hw.ac.uk>

I keep inviting people who offer me information, to let me know what they would like by way of swaps.

I suddenly thought I have a backlog of British "First Day Covers" which are worth typically $5; would be happy to circulate them as currency or for swaps.

I collect slide rules, multimeters, advertising gimmicks and gismos, small unusual tools, catalogues, ...

Thanks for all the ideas about reflex receivers. I'm trying to make something a bit unusual usuing '20s tubes.

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Memoria minuitur, nisi eam exerceas

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 05:03:31 EST
From: MNHopkins <MNHopkins@aol.com>

To: Boatanchors@theporch.com
Subject: Reflex=Doerle
Message-ID: <8ab99ea7.34cdb0f5@aol.com>

Where were you guys in '32?

The most famous of these rigs was the Doerle. There were clubs about this two tuber that was shown in the December 1931 edition of Short Wave Craft. In the main a Dorele is a restatement of the two-tube regenerative blooper used by most hams back then.

--Orr, Wiliam, Ham Radio Horizons, Apr. 1979

send $1 and two stamp SASE for copy of the 6-page article.

73 de ab5L, michael in dallas, student of Tecraft and International (ICM) ham products and mementoes of Six Meters' Golden Age: 1957-58
Michael Hopkins
Box 226841
Dallas, TX 75222 MNHopkins@AOL.com

Date: Tue, 27 Jan 1998 06:22:46 -0500 (EST)
From: Sandra L Knepper <slkst29+@pitt.edu>
To: boatanchors@theporch.com
Subject: B&W 160 meter coil price
Message-ID: <Pine.GSO.3.96L.980127062041.5220A-100000@unixs4.cis.pitt.edu>

I have a nearly new B&W 160 HDVL coil that a local wants to purchase.
What would be a fair price for this rather scarce coil.

Thank you.

Dave, W3BJZ

Date: Tue, 27 Jan 1998 06:39:56 EST
From: K1HC <K1HC@aol.com>
To: boatanchors@theporch.com
Subject: National NTE 6000 Help
Message-ID: <613478a0.34cdc78e@aol.com>

First, I've tried the various sources for a manual/schematic for this item without luck. If you know of a source for a schematic and/or manual for this xmtr, please reply. Best I can determine it is a late 1930's exciter, rack mounted, about 10 watts on 80, 40, 20, and 10 meters. I also have a rack mounted small National scope (3 inch screen) that may have been an accessory. Can anyone help? I'd be happy to pay a reasonable sum for a manual/schematic copy. Thanks!

Dick, K1HC

Date: Tue, 27 Jan 1998 05:53:43 -0800 (PST)
From: Stanley Wilson <microres@crl.com>
To: boatanchors@theporch.com
Subject: WTD: Johnson Ranger
Message-ID: <Pine.SUN.3.91.980127055143.4256A-100000@crl8.crl.com>

I am looking for a nice Johnson Ranger I or II. What is the current value of a nice one that is in good physical and electrical condition ?

Thanks, Stan AK0B

Date: Tue, 27 Jan 1998 05:04:25 -0800 (PST)
From: Stanley Wilson <microres@crl.com>
To: Scott Robinson <spr@earthlink.net>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Reflex receivers - Design Information
Message-ID: <Pine.SUN.3.91.980127050140.17155B-100000@crl10.crl.com>

RCA's Radiotron Designer's Handbook third and fourth edition have design information on these circuits. The 4th edition has three different circuits. The positive and negatives for the circuit are also given.

The tube plays a big part and 6G8-G is recommended.

de stan AK0B

Date: Tue, 27 Jan 1998 08:14:16 -0600
From: "Don Buska" <d.buska@AAIATE.COM>
To: "Boatanchors Tempe" <boatanchors@LISTSERV.TEMPE.GOV>,
"BA Swaplist" <baswaplist@foothill.net>,

Cc: "Wiseman, Barry" <er@frontier.net>
Subject: Electric Radio Magazine Index - NEW On-Line Search Engine
Message-ID: <98Jan27.083729cst.33159@gateway.aaiate.com>

I have added an On-Line version of the Electric Radio Magazine Index to my web site. This is a Java based grid (looks like a spreadsheet) searchable index. I will be updating this on-line index more frequently than the downloadable version also offered at this site.

Who can use it?

Anyone with a Java enabled web browser. I have successfully used the following:

Netscape Ver 2.02 for OS/2
Netscape Ver 3.0 Gold for WIN95
Netscape Ver 4.0 for MAC
Explorer Ver 3.02 for WIN95

How do I know if my browser is Java enabled?

The easiest way is when you enter my home page if you see a the fading text "N9OO" alternating with "Amateur Radio Station", you then have a Java enabled browser.

How fast is it?

It's as fast as your computer. What happens when you enter the viewing page is that the index file and the Java code will be loaded into your computers memory. This loading will take approximately 1 minute, but depends alot on internet activity, connection speed and the computer you are using. The index and Java code are currently around 250KB. Once loaded and running it is very fast and only limited by your computers speed.

Where is it?

http://www.qsl.net/n9oo

Try it out! Forward any problems and suggestions to me via email.

Enjoy es 73

Don N9OO

Date: Tue, 27 Jan 1998 09:51:00 -0500 (EST)
From: "Roberta J. Barmore" <rbarmore@indy.net>
To: MNHopkins <MNHopkins@aol.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Reflex=Doerle
Message-ID: <Pine.SUN.3.96.980127090739.17696A-100000@indy2>

Hi!

On Tue, 27 Jan 1998, MNHopkins wrote [quoting Bill Orr]:

> The most famous of these rigs was the Doerle. [...] shown in the
> December 1931 edition of Short Wave Craft. [...] a restatement of the
> two-tube regenerative blooper used by most hams back then.

Ummm...the Doerle sets are many things, most saliently very fine 0-V-1 regen sets (translated to British, it's a straight receiver using reaction in the detector followed by a one-valve audio amp). But it's *not* reflexed. (FWIW, Walter Doerle turned out *many* variations on this set, and all of them are fine performers if carefully built).

The classic reflex set is the Harkness circuit, which I'm diggin' out next, having already unearthed Gernsback's "How To Build 4 Doerle Short Wave Sets" (available from Lindsay Publications). Dope on the Harkness can be found in Elmer Osterhoudt's booklets from Modern Radio Labs. And here it is, "MRL Data Sheets Vol. 3," p 11--excerpts follow:

"We get many requests for info. on the old Harkness circuit of the 20's. [...] This was in the days when a 201-A sold for $5.00, and it was necessary to get all the "zoom" out of a very poor amplifying tube [...]."

The circuit has one triode RF amp driving a diode (fixed iron pyrites in the original!) via an RF transformer; output of the diode feeds an AF xfr, which is then coupled back into the grid of the FR amp (xfr secondary is in series with the secondary of the RF input coil!); then on the output side of the tube, the bottom of the plate winding on the RF transformer connects to the top of the primary of another AF xfr, which then drives another AF stage and that drives the headphones.

EO shows a few other circuits--a one-tube (+ diode det), another one using a 6B8 (dual diodes+pentode) to do all the work, and a three-tuber with a grid-leak detector and the first stage reflexed.

Never much on heavy theory (he was a practical guy, and if he said something worked, it'd work; but his "why" can be iffy), EO notes there's a little more gain from a reflex than one would predict (there's some interaction), and so classes it as "another form of regeneration." That's in line with the wisdom of the day but tain't so: there's no RF feedback path and performance is *improved* by taking steps to keep the RF outta the AF and vice versa (other than in the tube). The Harkness is said to "not be a DX set," but it'd fare pretty well, I'd think, on the LW BC sigs available in the EU.

Interestingly, EO's original Harkness shows *no* RF bypassing on the AF transformers used each side of the reflexed stage. This is typical of 1920s design, and works thanks to the rather high shunt & between-windings capacitance of the older AF transformers. (And it's not luck, the OT designers were well aware of the RF-bypassing effect and exploted it!)

There ya have it! Bill, I can probably get away with copying just this one page for you--but not all the MRL publications are still available from Paul Nelson (not the BA-list one), who now runs MRL: Modern Radio Labs, P.O.Box 14902, Minneapolis MN 55415-0902, USA. DS Vol. 3 (12pp, 8.5"x11") will run all of $0.95+post; the entire EO collection (Fifteen little Handbooks, 3 Detail Print Files (~15pp @), 6 Data Sheets (12pp @) and seven back numbers of little newsletters) is $39.00, P&P paid within the US (write & ask about overseas shipping, which I'd guess at $10.00 or so). It's kind of handy--EO's diagrams are a bit scribbly and he's no engineer but he knew what he was about and writes it down clearly.

73,
--Bobbi

Date: Tue, 27 Jan 1998 09:52:09 -0500 (EST)
From: Nick England <nick@cs.unc.edu>
To: boatanchors@theporch.com
Subject: National NC-1000
Message-ID: <199801271452.JAA10021@altair.cs.unc.edu>

Here's a bit of trivia for you National Radio fans:

I recently picked up a National NC-1000 receiver, manuf. about 1955.
The NC-1000 designation doesn't appear on the outside of the rig,
but is on the paper tag giving the tube layout.

Yep, "National Radio Co.   Malden Mass   NC-1000"

Puzzled ?
This is the "Criterion" AM/FM tuner National made for the hi-fi market.
Has a shared IF strip and can receive AM and FM simultaneously for binaural

output. Also has a space for a plug-in "Horizon 5" pre-amp.

This boatanchor folkware brought to you by:
Nick KD4CPL

Date: Tue, 27 Jan 98 06:59:14 PST8
From: jcreid@CCGATE.HAC.COM
To: boatanchors@sco.theporch.com
Subject: SX-43 knob question
Message-ID: <9800278859.AA885913255@CCGATE.HAC.COM>

Hi Gang,

I finally found the replacement knob for the CW Pitch control on my SX-43. There's on problem, however. The shaft is a threaded rod(about 4-40 or so) which I believe is connected to the slug on the BFO oscillator coil. The knob only fits a 1/4" shaft. I looked at the knob on my SX-42 and lo and behold, there's a 1/4' shaft for the BFO coil. Am I still missing a piece or did the knob for the 43 have a 1/8" diameter hole instead of a 1/4"? Maybe one of you 43 owners out there can clue me in. Thanks in advance.

-Jim N6SVS
jcreid@ccgate.hac.com

Date: Tue, 27 Jan 1998 09:07:33 -0600 (CST)
From: arc5@ix.netcom.com
To: boatanchors@sco.theporch.com
Subject: Collins S-Line: Condition Guide?
Message-ID: <19981277553326500@>

Where can I find the Collins Collector's Assoc.
condition guidelines so I can accurately
grade an S-line?

TNX ES 73 DE Dave Stinson AB5S
arc5@ix.netcom.com

Date: Tue, 27 Jan 1998 09:07:30 -0600 (CST)
From: arc5@ix.netcom.com
To: 71333.144@compuserve.com

Subject: Cardboard Calculators
Message-ID: <1998127841523157244@>

I have the old ARRL Lightening Calculators versions "A" and "B," the ARRL slide-rule-like L/C/F and coil-winding calculator (which wild horses couldn't drag from me), the pre-PC-era round OSCAR orbit calculator, and the 1950's era round Radio and Television News L/C/F and coil phase-angle calculator. They are great tools and a darn sight faster and easier to use then a PC. By the time I load a calculation program, enter the values and print out a result, I can "slip/slide/turn" my cardboard calculators and be long done!

73 DE Dave Stinson AB5S
arc5@ix.netcom.com

P.S. Don-- I'm sending you the OSCAR calculator to add to your collection. It's in new condition and is pretty neat looking, but by the time I figure out how to use it I really *CAN* load a program!

Date: Tue, 27 Jan 1998 07:28:27 -0800
From: "Arden Allen" <aallen@sirius.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Subject: Re: Reflex Radios
Message-ID: <199801271527.HAA14599@mail1.sirius.com>

I suddenly remembered, I have a reflex receiver I built from a kit (sorta). My Heathkit AR-3's first audio amp is also a BFO in CW mode. I wonder if it qualifies. Mumble...mumble...

Give your loved ones Gummy Bears.
Arden Allen KB6NAX Vallejo, CA aallen@sirius.com

Date: Tue, 27 Jan 1998 07:26:14 -0800 (PST)
From: Stanley Wilson <microres@crl.com>
To: arc5@ix.netcom.com
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Cardboard Calculators
Message-ID: <Pine.SUN.3.91.980127072426.17596C-100000@crl10.crl.com>

Hi Dave,

I had the good luck of having the college professor who designed the ARRL
LCF calculator. He was an interesting fellow and believed in putting
theory into practice. I do not think he even had a ham ticket. de stan ak0b

---

Date: Tue, 27 Jan 1998 10:42:48 -0500
From: RSOLOMON@systems.TEXTRON.COM
To: "   -   (052)boatanchors(a)sco.theporch.com"
<boatanchors@sco.theporch.com>,
        "   -   (052)esieb(a)gmsiworld.com" <esieb@gmsiworld.com>
Subject: SB-200 on the WARC Bands
Message-ID: <0034100002276057000002L072*@MHS>

I had an SB-201 (same as SB-200 except no 10 meters). I found the
input circuit coils to have no slugs and therefore not tuneable.
Most likely an "improvement" over the SB-200 ?? Sold it and got
an Amp Supply LK-450 which does have a tuneable input circuit and
is also configured to add 17 & 12 meters. Better option I thought.
Also, I cannot see the reason for all the bad press on Amp Supply
amps. I think the LK-450, which has QSK, to be built like the
brick &%$#. No problem here, just keeps the price depressed and
makes it more affordable.
73, Dick, W1KSZ

Date: Tue, 27 Jan 1998 09:47:28 CST
From: jackiv@juno.com (John M Iverson)
To: k9uwa@CRIS.COM
Cc: boatanchors@theporch.com
Subject: Re: Transformer Help needed
Message-ID: <19980127.094929.3286.2.jackiv@juno.com>

HI as a preamble to your question, do you know what the bias is on
the'45s. if they are operating class B as many of those pp/par sets do
you need a lower ratio transformer, however the little triode driver
probably says it all-- class A so the listed tx may work.. Oh the
vagaries of tubes.. 73 jack
Jack Iverson   K0EWU   jackiv@juno.com

On Mon, 26 Jan 1998 23:33:40 +0000 "John K9UWA" <k9uwa@CRIS.COM> writes:
>Anyone have a Stancor Book.....
>
>Stancor A-4719 = A-73C ??

>
> I have been trying to find a Stancor A-73C which is the listed
>substitute
>part for the audio driver transformer in my Grunow 1101 (Riders 4).
>This set
>has push-pull parallel 45s (4 tubes) being driven by a 37 as the audio
>driver
>tube. Today I picked up a Stancor A-4719. The A-4719 is listed to be
>an audio
>input transformer from single 27, 37, 56, 76, 6C5,etc., to single or
>Pushpull
>grids of 42, 45, 47, 71A, 2A5, etc. It states it has a 3:1 ratio.
>
> Will this transformer work well in my set?
>
>Thanks for the help....de John K9UWA
>John Goller, K9UWA
>k9uwa@cris.com
>

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Or call Juno at (800) 654-JUNO [654-5866]

Date: Tue, 27 Jan 1998 09:48:57 CST
From: jackiv@juno.com (John M Iverson)
To: Mark.Richardson@cisco.com
Cc: boatanchors@theporch.com
Subject: Re: Information
Message-ID: <19980127.094929.3286.3.jackiv@juno.com>

QRP anyone??
Jack Iverson   K0EWU   jackiv@juno.com

On Mon, 26 Jan 1998 21:09:02 -0700 Mark Richardson
<Mark.Richardson@cisco.com> writes:
>Fellow BA'ers
>
>   I have a radio transmitter that I searching for information
>on,
>hopefully one of you may have run into it before. So here goes, Built
>by
>Western Electric about 1950+- as commercial and military point to
>point

```
>multiple-channel SSB or single channel DSB. Western Electric
>designation
>LD-T2, US Army signal Corps Destination T-265/FRC10. Specs as follows.
>
>        Frequency Range in Mc:
>                transmitter: 4 to 23
>        Type Modulation:
>                AM
>        Type of Signals:
>                Composite transmission consisting of
>tone-radiotelegraph,voice,facsimile, or other audio
>frequencies in the range from 100 to 6000 cps; also , standard
>double-sideband am.
>        Pwr Output:
>                4kw (ssb peak envelope power), 1 kw (dsb carrier)
>        Pwr Requirements:
>                transmitter: 10 kw, 230-v 50/60 3-phase ac
>        Major Units:
>                1 T-265/FRC10   84" x 84" x 42.5"       5800 lbs
>
>The information above is excerpts from  MIL-HDBK-161A/TM
>11-497A-1/NAVEXOS
>P-2058/TO 31-3-73 pages 199 and 200
>        Yes you read right 7 ft high 7 ft long 3.5 ft deep over 2.5
>tons. I
>picked up the radio in 1987, at sealed bid auction at Utah Valley
>State
>Collage in Orem, Utah. Came with manuals and blueprints. I kept it in
>storage until 1994 when I moved it to my QTH and restored (3 years)
>it. All
>running now for 6 months mostly on 20 17 15 tuning range is wide
>enough for
>80 thru 10 meters.
>        What I would like is information about its life in military or
>commercial operations. Maybe when it was built etc, etc. Judging from
>the
>tube line up (79 tubes) and types I am guessing about 1950, the
>blueprints
>are dated 1951. I have also have photos (compressed windows
>bitmaps),if
>anybody wants them mail me, for reference.
>
>        Looking forward to hearing from the gang.
>                See you on the bands.
>
>
>                        Mark
>                        W7HPW
>       ||         ||              Mark Richardson
>      .||.       .||.             Systems Engineer
>     .||||.     .||||.            4001 South 700 East
>  .:||||||||:.:||||||||:.         Suite 500
>  c i s c o S y s t e m s         Salt Lake City, Utah   84107
>
>                     Office    801 264 6777
>                     Cellular  801 361 3097
>
>
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Or call Juno at (800) 654-JUNO [654-5866]

Date: Tue, 27 Jan 98 10:15:08 -0700
From: "Deane D McIntyre" <dmcintyr@acs6.ACS.UCALGARY.CA>
To: boatanchors@theporch.com
Subject: Re: Echophone
Message-ID: <9801271715.ZZ637305@acs6.acs.ucalgary.ca>

> A friend at work recently obtained an Echophone
> which he was told was manufactured by Motorola
> during WWII. However, there is no nameplate or any
> other manufacturer info.

Echophone was part of Hallicrafters. In the WWII period they made a series of inexpensive receivers. The cheapest were the EC-1/EC-1A/EC-1B series, which were the precursors of the S-38. I have a EC-1B which has the same tube lineup as the S-38 (no suffix) but attemps to cover 540 kc-30 Mc in three bands instead of the four used in the S-38.
There were also more expensive models such as the EC-2 and EC-3, and also some aimed at the average consumer such as the EC-113 made after the war.

Which one does you friend have, and I can supply more speciic info.
I have a orginal "manual" (4 pages) for my EC-1B which includes the schematic and alignment instructions if you or anyone else on the list needs a photocopy.

Note that these are transformerless sets....have an isolation transformer handy when working on these.

73, Deane D McIntyre VE6BPO
dmcintyr@acs.ucalgary.ca

Date: Tue, 27 Jan 1998 13:55:05 -0500 (EST)
From: lee1@digital.net
To: BOATANCHORS@theporch.com
Subject: precision sig gen
Message-ID: <199801271855.NAA24747@ddi.digital.net>

Hi Gang

I reciently aquired a precision model 200c sig gen.
However the instruction book while very usefull
does not have the correct schematic.
The schematic shown uses a 6au5 ,6u8 and a 5y3
mine must be an older model as it uses a 80,
6c5and a 6sj7. If anybody has the correct
diagram for this older model, I would sure appreciate it.
Will be glad to pay any costs to get schematic thanks 73 73 73
MY add is in my sig.

Thank the good LORD for all that you have!!!

67yr old semi disabled senior   trying to get code speed to 13wpm
(stroke got my eyesight, balance & coordination) SO ONLY BA'S NO SOLID STATE

Leon (lee) Wiltsey   4600 Lake Haven blvd   Sebring fl. 33872   KF4RCL TECK+

Date: Tue, 27 Jan 1998 13:58:44 EST
From: Jderm740 <Jderm740@aol.com>
To: boatanchors@theporch.com
Subject: Away All HRO Mods
Message-ID: <e848ebe8.34ce2e67@aol.com>

Hi Gang

All HRO Mods were mailed today. Give the PO about a week or ten days and if I missed anybody let me know. I have more copies. (I know that will upset some, but that's life).

Jack   Jderm740@aol.com

Date: Tue, 27 Jan 1998 20:03 +0000 (GMT Standard Time)
From: midshires@cix.co.uk (Andrew Emmerson)
To: boatanchors@theporch.com
Cc: midshires@cix.co.uk
Subject: BA-era satellites
Message-ID: <memo.19980127200321.32935A@midshires.compulink.co.uk>

I've just been reading Arthur C. Clarke's 1945 article again, in which he proposed geostationary communications satellites. What I didn't spot before was this: "While this article was being written, it was announced that the Germans were considering a similar project, which they believed possible within fifty to a hundred years."

Can anyone provide more details?

Andy G8PTH.

End of BOATANCHORS Digest 1895
****

>From ???@??? Wed Jan 28 09:49:24 1998
Message-Id: <199801280409.WAA28967@sco.theporch.com>
Date: Tue, 27 Jan 1998 22:09:19 CST
Subject: BOATANCHORS digest 1896

BOATANCHORS Digest 1896

Topics covered in this issue include:

1) Desperate...
   by Ken Gordon <keng@uidaho.edu>
2) National R-175 Choke
   by "Herbert M. Rosenthal" <herbrose@lobo.net>
3) Halli. Sky Champion: Info Needed
   by arc5@ix.netcom.com
4) Xtal Oscillator tubes/circuits...
   by Ken Gordon <keng@uidaho.edu>
5) Re: Reflex=Doerle
   by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
6) Re: Xtal Oscillator tubes/circuits...
   by Stanley Wilson <microres@crl.com>
7) Re: Halli. Sky Champion: Info Needed

by Al Klase <skywaves@bw.webex.net>
8) Re: Halli. Sky Champion: Info Needed
by Richard Post <post@ouvaxa.cats.ohiou.edu>
9) Re: Cardboard Calculators
by Sandy W5TVW <ebjr@worldnet.att.net>
10) Re: Reflex=Doerle
by "Roberta J. Barmore" <rbarmore@indy.net>
11) DX-40 questions
by Richard Post <post@ouvaxa.cats.ohiou.edu>
12) Re: Collins S-Line: Condition Guide?
by Sandy Meltzer <sandy@sandy.com>
13) RE: My R-175 choke
by "Herbert M. Rosenthal" <herbrose@lobo.net>
14) RE: SB-101 Saga still alive
by Ed Sieb <esieb@gmsiworld.com>
15) ER cover this month....
by john <johnmb@mindspring.com>
16) need manual or schematic
by lee1@digital.net
17) Re: Reflex=Doerle
by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
18) "Echo my login" URL
by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
19) Neon Sign Transformer Wanted
by Allen Tucholski <allent@en.com>
20) Name That Cabinet
by n5off@w5ddl.aara.org
21) Collins VFO and VT4-Cs for trade
by Charles Knaack <knaack@wsu.edu>
22) Re: Reflex=Doerle
by "Roberta J. Barmore" <rbarmore@indy.net>
23) Re: SX-43 knob question
by Bob/WB0AUQ <brainbol@lawrence.ks.us>
24) National R-175A RF choke
by Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
25) RE: Rare Tubes?
by Mark Richardson <Mark.Richardson@cisco.com>
26) Re: Cardboard Calculators
by w7ni@teleport.com (Stan Griffiths)

Date: Tue, 27 Jan 1998 12:06:38 -0800 (PST)
From: Ken Gordon <keng@uidaho.edu>
To: boatanchors@sco.theporch.com
Subject: Desperate...
Message-ID: <Pine.BSF.3.95.980127120212.10472A-100000@piobaire.mines.uidaho.edu>

I REALLY need either an instruction sheet/manual for the VHF Engineering VHF amp. model PA-1501-II or some directions to the company.

I have looked in QST and the latest I can find any mention of them is in 1976. I was sure I had seen mention of that company somewhere else since, but can't find that.

In 1976, the ad said that they were part of Brownian Electronics of Binghamton, New York and listed a number. When I called that number out of desperation, I got an obviously elderly lady who had no idea of what I was talking about.

I have searched the Internet and find no mention of them either.

I realize that this particular piece of equipment doesn't qualify as a BA, since it could barely hold down a paper boat, but you people are usually so helpful, I was hoping....

Ken W7EKB

Date: Tue, 27 Jan 1998 13:15:35 -0700
From: "Herbert M. Rosenthal" <herbrose@lobo.net>
To: BoatAnchors <boatanchors@theporch.com>
Subject: National R-175 Choke
Message-ID: <34CE4061.527F@lobo.net>

I found one of these beautiful forms and rewound it with #26 'Formvar' wire.

Wrong!

The results were: an inductance of 110uH, when the old catalogs say 225uH, and, more important: the shorted resonant points measured with a ML Model 59 GDO are at 22.5MHz, 27.0, 33.2 and up. That 27 MHz is too close for comfort for ten meters, the 22.5 too close for 15..and the 110 uH gives only 1000 ohms impedance at 2 MHz..not so hot for 160M when my plate load is about 1500 ohms (3 x 811As @ 1500V).

If someone has one of these, I'd very much appreciate a measurement of the wire size, so I can rewind it to the original specs, and avoid some fireworks.

Thanks,

Herb Rosenthal W5AN

herbrose@lobo.net

Date: Tue, 27 Jan 1998 14:42:34 -0600 (CST)
From: arc5@ix.netcom.com
To: boatanchors@sco.theporch.com
Subject: Halli. Sky Champion: Info Needed
Message-ID: <19981271442193269620@>

I'm trying to get the time to work on a beautifully preserved
Hallicrafters Sky Champion. Need some alignment info.
What was the IF frequency? Looks 455 KC but need to
be sure. Also, what years were these produced? I
don't see them in any ads WW-II or later.

73 DE Dave Stinson AB5S
arc5@ix.netcom.com

Date: Tue, 27 Jan 1998 12:53:49 -0800 (PST)
From: Ken Gordon <keng@uidaho.edu>
To: boatanchors@sco.theporch.com
Cc: glowbugs@www.atl.org
Subject: Xtal Oscillator tubes/circuits...
Message-ID: <Pine.BSF.3.95.980127120642.10472B-100000@piobaire.mines.uidaho.edu>

Finally copied an article from March 1950 QST, page 28. Which confirmed
many things I "knew" from experience, but had no direct, quotable,
evidence for.

Thanks very much to who ever mentioned it to me.

I have said for many years that the 6AG7 was the best oscillator tube
for use in our BA rigs, and this article proves it.

The 6V6, 6F6, 6L6, etc fall FAR short of the 6AG7 in this.

In the BC-610, for instance, if the 6V6 crystal oscillator were simply
re-wired for the 6AG7 most of the problems with keying, chirp, and drift
would go away, the crystal current would be lower, and the available drive
would be greater.

My question to the group, since I do not have any very thorough tube data
books, is what more modern tube would closely exhibit the important

parameters of the 6AG7, since the 6AG7 is rather large and needs an octal socket? On a very surface examination, the 6CL6 comes pretty darned close, but that tube is getting hard to get too. I am not particularly concerned about plate dissipation, since low drive levels can be amplified, but the other factors such as Gm, plate resistance, interelectrode capacitances, internal shielding, etc., would seem to me to be more critical.

If there is enough interest, I will scan this article (it is pretty short) and make it available on my web page for those who wish to examine crystal oscillators as applied to BA.

BTW, as an aside, it appears to me that the 813 crystal oscillator transmitter some of us have been building is none other than the Tri-Tet. I am not SURE about this, but it sure looks like it, and the article I mentioned above discusses the Tri-Tet in some detail.

The article discusses a) the grid-plate, b) Tri-Tet, and c) modified Pierce circuits, and the four tubes mentioned. All are connected as ECO and use regulated screen voltage of 150 v.

Of the three circuits, the modified Pierce is easiest on crystals with ALL tubes examined. Crystal currents in the other two circuits were significantly higher EXCEPT if using the 6AG7, with the grid-plate circuit being the worst.

One VERY interesting point about the Tri-Tet circuit concerns the tuned circuit in the cathode: if this is not tuned to the proper frequency, CRYSTAL CURRENT GOES BALLISTIC. I mention this because one of our list members mentioned destroying his only Novice crystals when he tried to get his ARRL 75 watt crystal controlled transmitter going when he was younger. That circuit is the Tri-Tet.

One further point concerning the 813 Xtal oscillator transmitter: the article makes mention of the fact that the pilot lamp in the crystal circuit must be shorted out for best keying, since the pilot lamp is a temperature variable resistor.

Lastly, the article also confirms what Bob Keyes NA4G urges, that if one is going to use "cathode" keying, one should return the grid leak to the CATHODE not directly to ground, since this actually is -B keying and results in much less chirp.

I hope others here find this information as interesting as I have.

Ken W7EKB

Date: Tue, 27 Jan 1998 21:27:40 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: rbarmore <rbarmore@indy.net>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex=Doerle
Message-ID: <199801272127.VAA14073@punt1.hw.ac.uk>

Many thanks for the MANY replies about reflex circuitry. It's got to where I can't really thank each individual separately, although I would like to do so.

I have now had examples of a single tube doing (A) IF + AF, (B) RF + AF, (c) AF + BFO, and other combs and perms.

I'm guessing it MIGHT be possible, with modern passive components, to have a tuned RF input to the grid of a tube in the normal way, and a pure resistance as load; then to take RF out from the anode using a small C, and AF out using an RF choke and a 0.1 uF or thereabouts.

Being a suspicious type I might put a pot between cathode and grid, and feed the audio back into the slider. A more permanent arrangement when I know IF it works.

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Thanks again everyone and I know there's more in the pipeline. I'll try to post anything of general interest but I'm not moving fast owing to waiting for the hosp to find out why the pains in the chest.

(Can I sue the gas supplier for causing stress I wonder?)

Thanks again all,

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 13:42:41 -0800 (PST)
From: Stanley Wilson <microres@crl.com>
To: Ken Gordon <keng@uidaho.edu>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Xtal Oscillator tubes/circuits...
Message-ID: <Pine.SUN.3.91.980127132852.23200B-100000@crl7.crl.com>

Hi Ken,

I have found many of your suggestions to be correct. I am building a 6L6 rig and I was going to use a Tri-tet until I looked into the xtal current. One would have to use the old Ft-243 crystals in those circuits. Unless you are doubling in the xtal osc I could see no reason to use it. I also settled on using a 6AG7. Octal sockets are easy to find and a 6AG7 goes for a dollar or two at most hamfests. I am sure one will last a life time. I considered using a 5763 but was not certain I could find any of those in the future.

I have also been looking at the drive to the final stage. Most tubes only need 0.1 to 0.25 watt of drive plus enough to overcome the grid bias loss. Sure do not need a oscillator stage running 5 or 10 watts.

I am going to use 6L6GC from russia. They look good electrically, however, they could use some quality control on the physical side. I purchased four and two were installed at an angle in the octal base. Price was $4.10 so not bad (Fair Radio).

It is interesting when you try to build some of the higher voltage designs how many parts are now hard to find. Caps -filter, variable and bypass. Crystal sockets, RF chokes, reasonable priced power transformers. In another ten years it may be impossible to duplicate some of the tube designs.

Thanks for the post on the osc circuits.   de stan ak0b

Date: Tue, 27 Jan 1998 17:19:23 -0500
From: Al Klase <skywaves@bw.webex.net>
To: arc5@ix.netcom.com
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Halli. Sky Champion: Info Needed
Message-ID: <34CE5D6B.616E00A4@bw.webex.net>

CORRECT the IF is 455.

Specified RF alignment points are:

Band 1	1400KC	600KC
Band 2	4 MC	2MC
Band 3	14MC	7MC
Band 4	34MC	17MC

The S-20R, Sky Champion appears in the 1945 Hallicrafters catalog. Moore claims production dates of 1939-45.

73,
Al

arc5@ix.netcom.com wrote:
>
> I'm trying to get the time to work on a beautifully preserved
> Hallicrafters Sky Champion. Need some alignment info.
> What was the IF frequency? Looks 455 KC but need to
> be sure. Also, what years were these produced? I
> don't see them in any ads WW-II or later.
>
> 73 DE Dave Stinson AB5S
> arc5@ix.netcom.com

--
Al Klase - N3FRQ
skywaves@bw.webex.net
Flemington, NJ 08822
Web Page: http://www.webex.net/~skywaves/home.htm

Date: Tue, 27 Jan 1998 17:27:17 -0500
From: Richard Post <post@ouvaxa.cats.ohiou.edu>
To: boatanchors@theporch.com, arc5@ix.netcom.com
Subject: Re: Halli. Sky Champion: Info Needed
Message-ID: <v03007804b0f40e6ae412@[132.235.46.82]>

>I'm trying to get the time to work on a beautifully preserved
>Hallicrafters Sky Champion. Need some alignment info.
>What was the IF frequency? Looks 455 KC but need to
>be sure. Also, what years were these produced? I
>don't see them in any ads WW-II or later.
>
>73 DE Dave Stinson AB5S
>arc5@ix.netcom.com

Dave,

Don't know whether you are talking the S-20 or the S-20R. Both use an IF of 455. The S-20 has the silver dial and dates from 1938-39. It was replaced by the S-20R which was available before WWII as well as just after (1939 to 45).

The S-20 uses dual-ended tubes (grid cap on top.) S-20R uses single-ended.

Rich

____
visit the Museum of Radio and Technology website
http://ouvaxa.cats.ohiou.edu/~post/MRT/

personal Boatanchpor Pix website
http://ouvaxa.cats.ohiou.edu/~post/PIX/BA.html

Date: Tue, 27 Jan 1998 22:27:16 +0000
From: Sandy W5TVW <ebjr@worldnet.att.net>
To: don merz <71333.144@compuserve.com>, boatanchors@theporch.com
Subject: Re: Cardboard Calculators
Message-ID: <19980127222715.AAA2812@LOCALNAME>

At 03:34 PM 1/27/98 +0000, you wrote:
>Thanks for the reply. Yes I had heard about the ARRL calculators but I have
>never seen one. I'll include these in a summary of replies that I will post.
>
>73, Don
>
>	It would be nice to have someone make a "run" of these. One BAer was researching having a "repro" made of plastic of the "B" Lightning Calculator.
Maybe someone in the group has some connections somewhere?
	I have a circular type "B" that is good enough to be photographed for reproduction. ARRL also made a later version that was a "slide rule" type pattern. I have never seen that one.
	These are super nice when you are trying to wind a coil for a receiver or transmitter. They allow you to get pretty close in number of turns, turns per
inch, etc. when you have an existing coil form.
73,

E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive
Metairie, LA., 70001

860 Hartley 'ECO' construction "on hold"**
*** Looking for a TRC-10 transceiver ******
*** Looking for an RAL receiver ***********

Date: Tue, 27 Jan 1998 17:33:15 -0500 (EST)
From: "Roberta J. Barmore" <rbarmore@indy.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Reflex=Doerle
Message-ID: <Pine.SUN.3.96.980127173027.888A-100000@indy3>

Hi!

I *hate* being dyslexic! Spliced two sentances in my first post to this thread, and mangeled the meaning of both!

First off, *ALL* of the MRL publications *are* still available.

Second, i meant to say to Bill (etc.) that could probably get away with copying the one-page write-up of the Harkness; but please note, MRL will sell the DP (Vol. III) that has it for $0.95+post and we do want the company to stay in business.

73,
--Bobbi

Date: Tue, 27 Jan 1998 17:52:10 -0500
From: Richard Post <post@ouvaxa.cats.ohiou.edu>
To: boatanchors@theporch.com
Subject: DX-40 questions
Message-ID: <v03007805b0f41048548b@[132.235.46.82]>

Friendly order of the heavy-metal haulers,

I picked up a lonesome DX-40 at the Nelsonville Hamfest. Have no docs as of yet. Could use the tune-up and schematic pages.
Have read the DX-35 QST review, September '56. Is the DX-40 a beefed up DX-35? I notice that Heath discontinued the 35 at about the same time that the 40 was introduced. Does it use the same stacked B+ oscillator-buffer

arrangement? I assume the screen modulation is the same or similar? Any major changes?

Tnx es 73 de Rich KB8TAD
postr@ohiou.edu

____
visit the Museum of Radio and Technology website
http://ouvaxa.cats.ohiou.edu/~post/MRT/

personal Boatanchpor Pix website
http://ouvaxa.cats.ohiou.edu/~post/PIX/BA.html

Date: Tue, 27 Jan 1998 15:03:27 -0800
From: Sandy Meltzer <sandy@sandy.com>
To: arc5@ix.netcom.com
Cc: <boatanchors@theporch.com>
Subject: Re: Collins S-Line: Condition Guide?
Message-ID: <199801272259.OAA22767@cactusnet.com>

Hi Dave,

At 09:07 AM 1/27/98 -0600, you wrote:
>Where can I find the Collins Collector's Assoc.
>condition guidelines so I can accurately
>grade an S-line?

The CCA grading standards can be found at:

http://www.teleteam.com/%7ejmiller/cca_html/grading.html

Hope this helps.

73's --sandy
KW6KW
sandy@sandy.com

Date: Tue, 27 Jan 1998 16:06:33 -0700
From: "Herbert M. Rosenthal" <herbrose@lobo.net>
To: BoatAnchors <boatanchors@theporch.com>

Subject: RE: My R-175 choke
Message-ID: <34CE6842.2547@lobo.net>

Well, thanks, gang..a landslide of info and offers...in just a few hours

The wire is #30..(thanks to Jack Iverson, K0EWU).

Couple of offer to just send me one; how about that!!

And for the several of you who suggested I reverse-engineer it: this is a multi-winding choke with 3 separate diameters, 8 separate axial windings.. it's about 6" high.. a thing of beauty to behold...but it would take someone smarter than me to <calculate> its impedance and resonance points...wind it and test it seems best, unless you can run it in SPICE, etc.

Look it up in an old National ad (Handbook, etc). Certainly is overkill for the peanut-whistle 500-600W linear that I shall attempt, but I can't seem to put it down.

Do look it up.it is not a simple single-layer solenoid.

One final thought: the current ARRL thinking, based on a vector analysis machine is that these multi-wound chokes aren't really any better than a single-layer solenoid, wound to give at least the plate load impedance at the lowest operating frequency, and having resonant points far as possible from the ham bands...who can argue with this?

h

Thanks to all who answered; I'll acknowledge to each of you.

Herb Rosenthal W5AN
herbrose@lobo.net

Date: Tue, 27 Jan 1998 17:31:42 -0500
From: Ed Sieb <esieb@gmsiworld.com>
To: Old Tube Radios <boatanchors@theporch.com>,
        "'Allan D. Fritsche'"
Subject: RE: SB-101 Saga still alive
Message-ID: <01BD2B4F.53E0E3E0@dstephen.gmsiworld.com>

Some thoughts on the SB101...
Typical grid drive for Class C operation is 3 mA per tube, or 6 mA max. =
However, in Class AB1 for SSB service, one strives to get max drive and =

max loading commensurate with good power out and efficiency. For maximum =
linearity, one would load up the finals to max, and drive heavily, and =
then in normal operation, limit the drive by either turning drive down, =
or by judicious use of ALC. The hoped-for result would be maximum =
headroom, while operating well below max ratings. Clean, linear =
operation.

As for low drive on 10... I suspect a buffer out of tune. Tweak away...

My good friend Carl, VA3CGM, may have a spare parts rig. (Carl Morin, =
VA3CGM, 613-523-8792)

Ed, VA3ES

Date: Tue, 27 Jan 1998 18:50:47 -0500
From: john <johnmb@mindspring.com>
To: boatanchors@theporch.com
Subject: ER cover this month....
Message-ID: <199801272351.SAA09577@brickbat8.mindspring.com>

        ...the gentleman on the cover of this months ER
looks vaguely familiar... something about that name, and
callsign...
        hmmmm....
        :-)
        /John

Date: Tue, 27 Jan 1998 20:06:02 -0500 (EST)
From: lee1@digital.net
To: BOATANCHORS@theporch.com
Subject: need manual or schematic
Message-ID: <199801280106.UAA09439@ddi.digital.net>

Hi Gang still trying to locate a book on the presision 200c
sig gen anybody got one they can copy will be glad tp poay fro it.
Pref an early one using the 80 rect not the late one using the 5y3. thanks
73 73 73.

Thank the good LORD for all that you have!!!

67yr old semi disabled senior trying to get code speed to 13wpm
(stroke got my eyesight, balance & coordination) SO ONLY BA'S NO SOLID STATE

Leon (lee) Wiltsey 4600 Lake Haven blvd Sebring fl. 33872 KF4RCL TECK+

Date: Wed, 28 Jan 1998 01:08:11 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: rbarmore <rbarmore@indy.net>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex=Doerle
Message-ID: <199801280108.BAA14684@punt1.hw.ac.uk>

(Just hoping this isn't a duplicate...if yes, apologies for bandwidth!)

Many thanks for the MANY replies about reflex circuitry. It's got to where I can't really thank each individual separately, although I would like to do so.

I have now had examples of a single tube doing (A) IF + AF, (B) RF + AF, (c) AF + BFO, and other combs and perms.

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(Can I sue the gas supplier for causing stress I wonder?)

Thanks again all,

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Net-Tamer V 1.10 - Registered

Date: Wed, 28 Jan 1998 01:27:36 +2400
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
To: nettamer <nettamer@nettamer.net>
Cc: boatanchors <boatanchors@theporch.com>
Subject: "Echo my login" URL
Message-ID: <199801280127.BAA14704@punt1.hw.ac.uk>

I was asking for the URL which helps you adjust your login by echoing the entire conversation. 2 or 3 people replied asking me to share it when I got it.

It is: www1.calweb.com/cgi-bin/dump/

Very useful! Especially when setting up a new browser or whatever.

Bill
GM8APX, qthr=No 6, EH4 6JY==Cave felem==No Rectangulars=Ikke Hawkering

Piscis nequam est nisi recens

Net-Tamer V 1.10 - Registered

Date: Tue, 27 Jan 1998 20:32:33 -0500
From: Allen Tucholski <allent@en.com>
To: boatanchors@theporch.com
Subject: Neon Sign Transformer Wanted
Message-ID: <2.2.32.19980128013233.00c974f8@en.com>

Looking for a 12,000 - 15,000 volt neon sign transformer for a science project for my son.
I want to build a Jacob's ladder.

Anyone have a old transformer?

Allen

Date: Wed, 28 Jan 1998 01:30:26 UTC
From: n5off@w5ddl.aara.org
To: boatanchors@theporch.com
Subject: Name That Cabinet
Message-ID: <175325@w5ddl.aara.org>

I just acquired a nice R-390A from a gentleman who worked for EAC. This rig had never been in the military, and came with spare parts, lots of books, etc, but also came with a mystery cabinet.

I don't think it is a CY-979 as I had originally thought as it has a few differences.

Can anyone name this cabinet?

It appears that the box was designed for a 390X. It has little stabbers in the back to receive the female brackets on the back of the 390A. The back is nearly completely open. The bottom is 80% open. There are no panels missing, looks like it was intended to be that way. The top is not a flip lid type. It is screwed down with about 12 or so screws.

The box has louvers all around. The sides have three columns of louvers, 12 in each column. The op has more, perhas 5 columns of louvers.

Overall, the box is compact, smaller than a normal Bud cabinet.

The inside has reinforcing corner brackets marked with BUD nomenclature.

There are no shockmounts, only feet.

Any ideas?

Tom

Date: Tue, 27 Jan 1998 18:49:48 -0800
From: Charles Knaack <knaack@wsu.edu>
To: Old Tube Radios <boatanchors@sco.theporch.com>
Subject: Collins VFO and VT4-Cs for trade
Message-ID: <l03020907b0f4416f1df7@[134.121.47.16]>

Hi All,

I have a NOS Collins type 70E-12 VFO serial #4218 in its original plastic bag. It appears that the unit was bought as a spare or replacement, but never installed. Does anyone need it? I also have some apparently unused VT4C (211) triodes in tattered JAN boxes.

I'll sell these for cash, but I rather trade for radios. I know what the audiophiles will pay for the triodes, and that AES is getting $165 a pop, but I'd be happy to trade any of the above far below market value for an interesting radio or a URM25-D to go with my R-390.

Try me. I'm reasonable...

Charles

****
Charles Knaack - ICP/MS and Stable Isotope analysis
Geology Dept. Washington State University
knaack@wsu.edu
****

Date: Tue, 27 Jan 1998 22:05:58 -0500 (EST)
From: "Roberta J. Barmore" <rbarmore@indy.net>
To: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
Cc: boatanchors <boatanchors@theporch.com>
Subject: Re: Reflex=Doerle
Message-ID: <Pine.SUN.3.96.980127213340.9720A-100000@indy2>

Hi!

On Wed, 28 Jan 1998, Bill Jarvis wrote:

> I'm guessing it MIGHT be possible, with modern passive components, to
> have a tuned RF input to the grid of a tube in the normal way, and a
> pure resistance as load; then to take RF out from the anode using a
> small C, and AF out using an RF choke and a 0.1 uF or thereabouts.

So far, so good; what we're doing with a reflex circuit is just plain ol' diplexing--this is most often seen in high-zoot mixer (frequency changer) design, where there's a tank (or tuned transformer, etc.) at the desired frequency, and the other terms in the output are handed off via a resonant circuit to a suitable termination (this is the "they gotta go *somehwere* theory," which we use all the time in transmitting television pix+sound; it reallyreally works). So splittin' off the RF & AF in the plate ckt should work okay as you have described.

> Being a suspicious type I might put a pot between cathode and grid, and
> feed the audio back into the slider. A more permanent arrangement when I
> know IF it works.

Zzzzzt! Nope, sorry; that resistance will then appear in parallel with the RF tank circuit in the grid, loading it down, robbing power and spoiling the Q. (Probably Loitering With Intent, too, and possibly comitting mopery)

Nope, the thing to do is to *RF* bypass the bottom of the grid tank coil to earth, using a value that won't eat too much audio; then from the RF-earthy end of the grid coil to ground, put that potentiometer, AF on the slider as planned. An RFC would not be out of the question here, though look out for unplanned RF resonances, it'd be no good to have NAA or one of the famous G-call VLF stations creeping in! (Memory has et the call--GBR?).

...Please note that the foregoing presupposes using the tube in question as an RF amp + AF amp, with detection accomplished via some other means--a nice infinite-impedance detector, perhaps, if 'tis fi of some height after which you are; or a crystal detector, or whatever--mayhap an Eberhard-Faber #2 pencil lead laid across a couple of tarnished Gilette double-edged razor blades, even (but it'll be microphonic). A Rule Of Thumb (and leave us not examine the source of that phrase too closely!) is that detectors do not like to do any other task--they're a lazy lot, or perhaps their work's harder than it seems; anyway, they aren't well-suited to reflexing, as they're already juggling RF & AF.

> (An audio transformer secondary in series with the grid tuning circuit
> would be more usual but I'm just wondering whether one could aim for
> higher fi (stop laughing) by not using transformers.

Depends on which transformers you are not using--I mean, if it's really an issue, they're still making super-duper AF interstage jobs, and you only have to sell one or two limbs to buy 'em (think $100+). RC coupling *can* get you better fidelity than a crummy transformer, but at the expense of gain: there's no voltage step-up in an RC network and the grid's a hi-Z thing, where volts count. You builds yer gadget and you takes yer chances; easy enough to change it if needed.

73,
--Bobbi

Date: Tue, 27 Jan 1998 21:07:03 -0600
From: Bob/WB0AUQ <brainbol@lawrence.ks.us>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SX-43 knob question
Message-ID: <34CEA0D7.169B@lawrence.ks.us>

Jim,
My SX-43 has the smaller threaded rod, (s/n AB50157).
--
73,

Bob/WB0AUQ   AMI #213   FISTS #1905
emailto:brainbol@lawrence.ks.us

Date: Tue, 27 Jan 1998 22:27:13 -0400
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
To: boatanchors@theporch.com
Subject: National R-175A RF choke
Message-ID: <v03102800b0f43feefc5e@[134.53.65.12]>

Hi Gang,

The comment about the National R-175A prompted me to dig one out of my junk box and measure its properties. (At least, I THINK it's an R-175A. There's no part number on it. If I'm wrong, then don't read any further!)

By way of background, the R-175A is, along with its plain-Jane cousin, the B&W 800, the most famous RF plate choke for amateur use. I don't know when the R-175A first came into being, but mine dates from the late 50's. The R-175A stands 6 inches tall, with one terminal on the top and the other affixed to a 1 inch ceramic standoff on the tripod metal base, which is stamped "PAT. APL'D FOR" on the bottom. The form itself is ceramic and divided into eight sections, with varying diameters. Three windings have a 1" diameter, three have a 3/4" diameter, and two have a 1/2" diameter. The idea behind the various sections was to reduce self-resonances, or to shift them well outside the amateur bands. That is, presumably, the patentable idea behind the design.

Mostly, though, the R-175A just looked great, with an irresistable visual appeal. The addition of an R-175A to even the most prosaic homebrew transmitter conveyed an instant classiness. It just looked super, perched on top the chassis next to a big copper coil and a glowing pair of 813s.

If you didn't actually have the rest of the transmitter, no matter. The R-175A by itself could stimulate wonderful fantasies of 4-1000As and 304TLs.

Alas, later designs of plate chokes favored simple, easy-to-build solenoids. These newer designs, now ubiquitous, work fine but are a big ho-hum esthetically. Nobody ever throws away an R-175A. Even if a runaway amplifier had vaporized the windings, one would have to be a philistine to toss the elegant ceramic form into the trash. It's just too dog-gone pretty.

Here are the actual specs of the R-175A, measured tonight with a PRM-10 GDO, an Autek RF-1, and a B&K 878:

Inductance (measured at 120 Hz): 156.2 uH
Inductance (measured at 1kHz): 146.8 uH

Self-resonant freqs. (open circuit) (MHz) 79.4, 73.0, 61.0, 55.5, 43.5, 26.3, 21.5 (weak)

Self-resonant freq: (short circuit): 23.3 MHz

I don't recall the current capacity, but 700mA sticks in my mind. Whatever, it's enough for that really big transmitter I've always wanted to build. Some day . . .

73,

Jim Garland W8ZR

Date: Tue, 27 Jan 1998 20:28:07 -0700
From: Mark Richardson <Mark.Richardson@cisco.com>
To: boatanchors@theporch.com
Subject: RE: Rare Tubes?
Message-ID: <2.2.32.19980128032807.006832b0@lint.cisco.com>

Am looking for Western Electric type 336A pentode with a 6 pin base, need 2. Used in a 110 Volt saturable reactor ac voltage regulator in my Western Electric LD-T2 radio transmitter. The only tubes that I don't have spares for. Also need Western Electric type 310A.
Same Trasmitter the was described in my earlier post.

If any of you have them, and would be willing to part with them, or know where I could find them, drop me a mail or call.

```
                        Mark
                        W7HPW



       ||         ||              Mark Richardson
      .||.       .||.             Systems Engineer
     .||||.     .||||.            4001 South 700 East
  .:||||||||:.:||||||||:.         Suite 500
  c i s c o S y s t e m s         Salt Lake City, Utah   84101

                      Office    801 264 6777
                      Cellular  801 361 3097
```

Date: Tue, 27 Jan 1998 20:07:39 -0800 (PST)
From: w7ni@teleport.com (Stan Griffiths)
To: 71333.144@compuserve.com
Cc: boatanchors@theporch.com
Subject: Re: Cardboard Calculators
Message-ID: <199801280407.UAA19100@smtp3.teleport.com>

>Well, it seems that there must have been many of these made for every
>conceivable radio purpose. Not to be outdone by those resistor guys, the
>Sprague folks made a similar one for their later-to-become-infamous black
>beauty capacitor line.

Hi Don,

I know at least one other "cardboard sliderule" collector: Tom Hill, WA3RMX. I don't think he is very serious about it, but he has quite a large collection. Tom's collection is not restricted to radio sliderules. He has ones for metric conversions, concrete mixing, steel plates, wire, vibration and shock, electronic shielding, etc, etc. I buy them for Tom everytime I see one at an estate sale. Some of his are really old.

Stan w7ni@teleport.com

End of BOATANCHORS Digest 1896
****